



Joint Typhoon Warning Center 2004 Year In Review



**Lt Col Amanda Preble
Director, JTWC**

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Overview



- **Mission**
- **History**
- **Area of Responsibility**
- **Year In Review**
- **2005 Season**

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JTWC Mission



Provide tropical cyclone forecast and warning support for Department of Defense, Department of State and US Government assets in the Pacific and Indian Oceans as established by Commander, United States Pacific Command.

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JTWC History



PACIFIC FLEET LETTER 14CL-45

From: Commander in Chief, U.S. Pacific Fleet
To: PACIFIC FLEET and NAVAL SHORE
ACTIVITIES, Pacific Ocean Areas

Subj: DAMAGE IN TYPHOON, LESSONS OF

1. On 18 December 1944, vessels of the Pacific Fleet, operating in support of the invasion of the Philippines in an area about 300 miles east of Luzon, were caught near the center of a typhoon of extreme violence. Three destroyers, the HULL, MONAGHAN, and SPENCE capsized and went down with practically all hands; serious damage was sustained by the CL MIAMI, the CVLs MONTEREY, COWPENS, and SAN JACINTO, the CVEs CAPE ESPERANCE, and ALTAMAHA, and the DDs AYLWIN, DEWEY, and HICKOX. Lesser damage was sustained by at least 19 other vessels, from CAs down to DEs. Fires occurred on three carriers when planes were smashed in their hangars; and some 146 planes on various ships were lost or damaged beyond economical repair by the fires, by being smashed up, or by being swept overboard. About 790 officers and men were lost or killed, and 80 were injured. Several surviving destroyers reported rolling 70 degrees or more; and we can only surmise how close this was to capsizing completely for some of them. It was the greatest loss that we have taken in the Pacific without compensatory return since the First Battle of Savo.

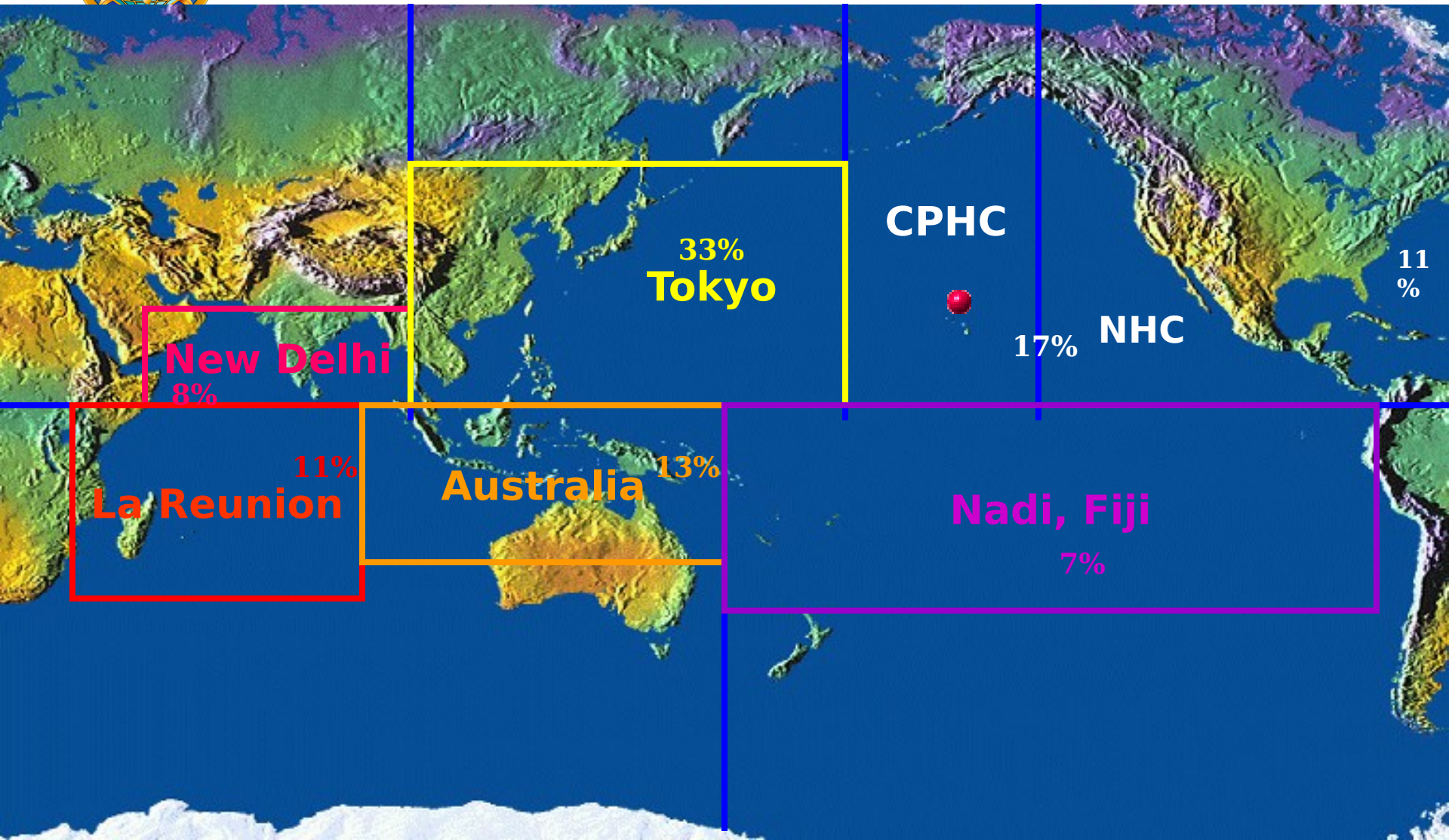
- Established 1959 to protect DoD assets
- USCINCPAC Instruction 3140.1 requirements to monitor and warn
- Jointly manned with 31 military and civilian positions
 - Air Force provides reconnaissance and forecasters
 - Navy provides facility, equipment, forecast function



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JTWC Area of Responsibility



2004 Tropical Cyclones vs Climatology



Arabian Sea & Bay of Bengal

2000: 4
2001: 4
2002: 5
2003: 3
2004: 5
25 Yr avg: 5

NW Pacific

2000: 34
2001: 27
2002: 31
2003: 27
2004: 32
25 Yr avg: 31

Cent Pac

2000: 4
2001: 4
2002: 5
2003: 2
2004: 2
25 Yr avg: 5

NE Pacific

2000: 19
2001: 17
2002: 16
2003: 16
2004: 16
25 Yr avg: 19

CPHC

NH

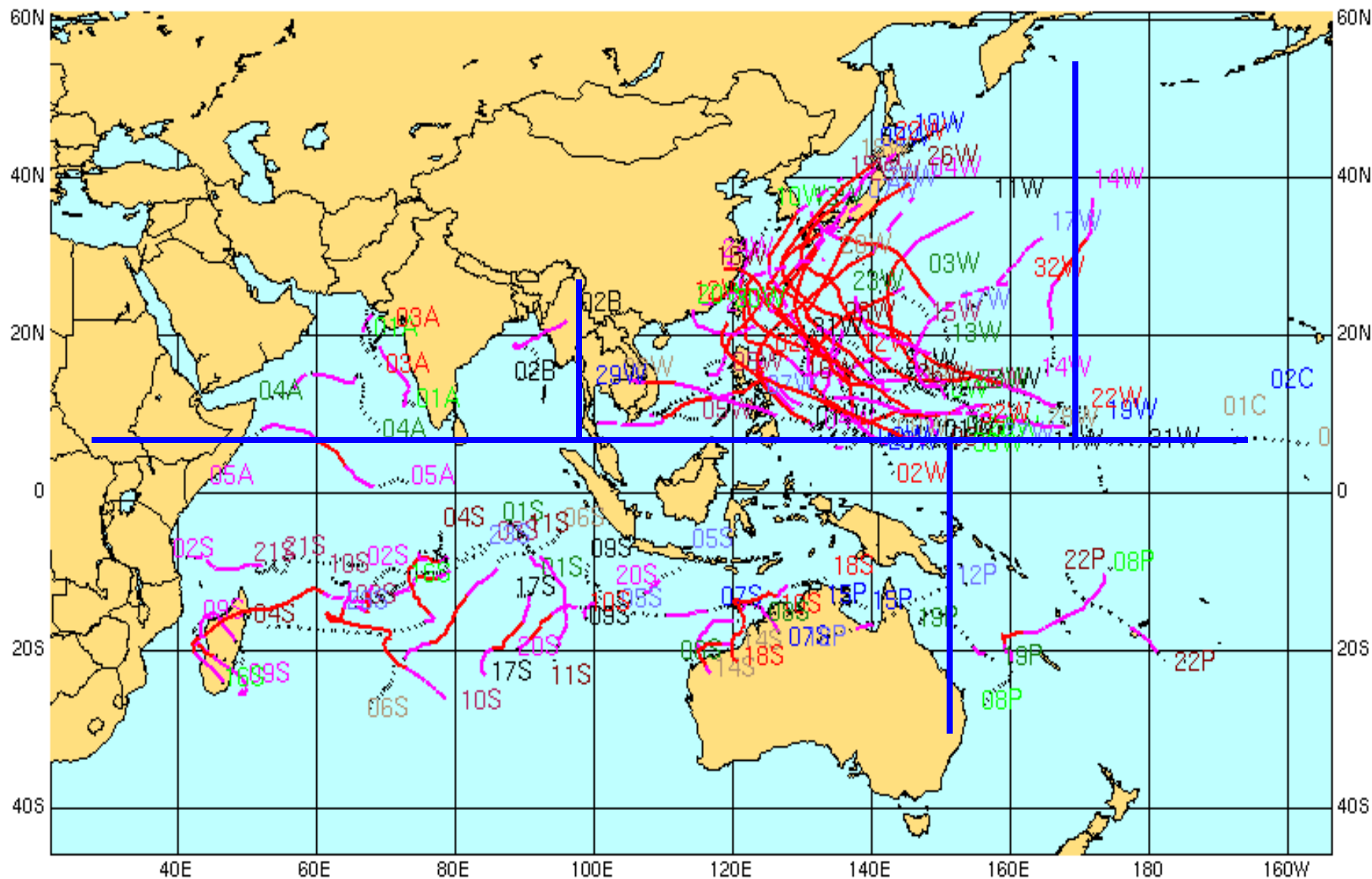
S Indian Ocean & Australia Region

2000: 22
2001: 18
2002: 21
2003: 20
2004: 25
25 Yr avg: 23

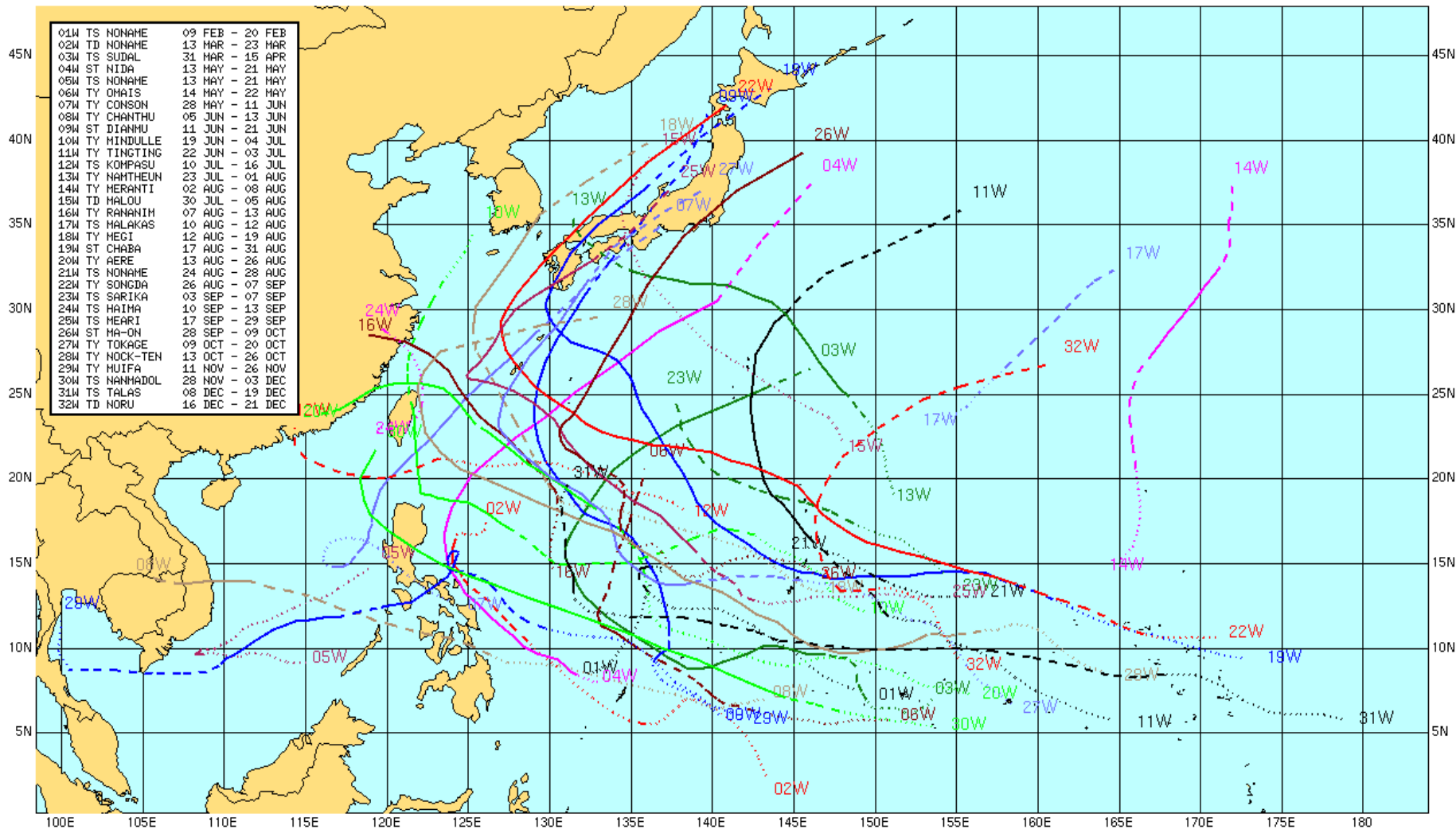
South Pacific

2000: 5
2001: 3
2002: 4
2003: 9
2004: 2
25 Yr avg: 6

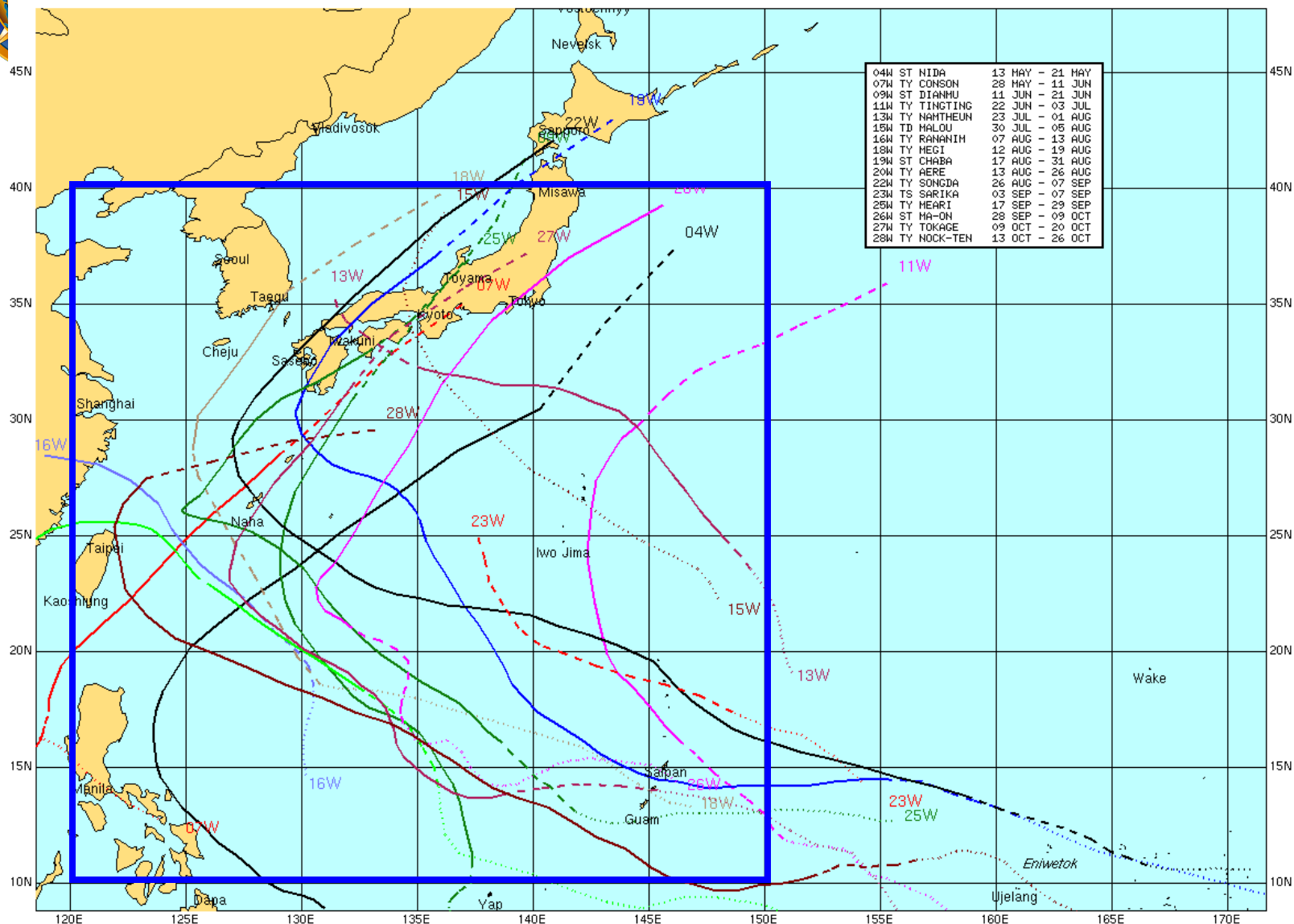
2004 All Storms



2004 West Pac Storms



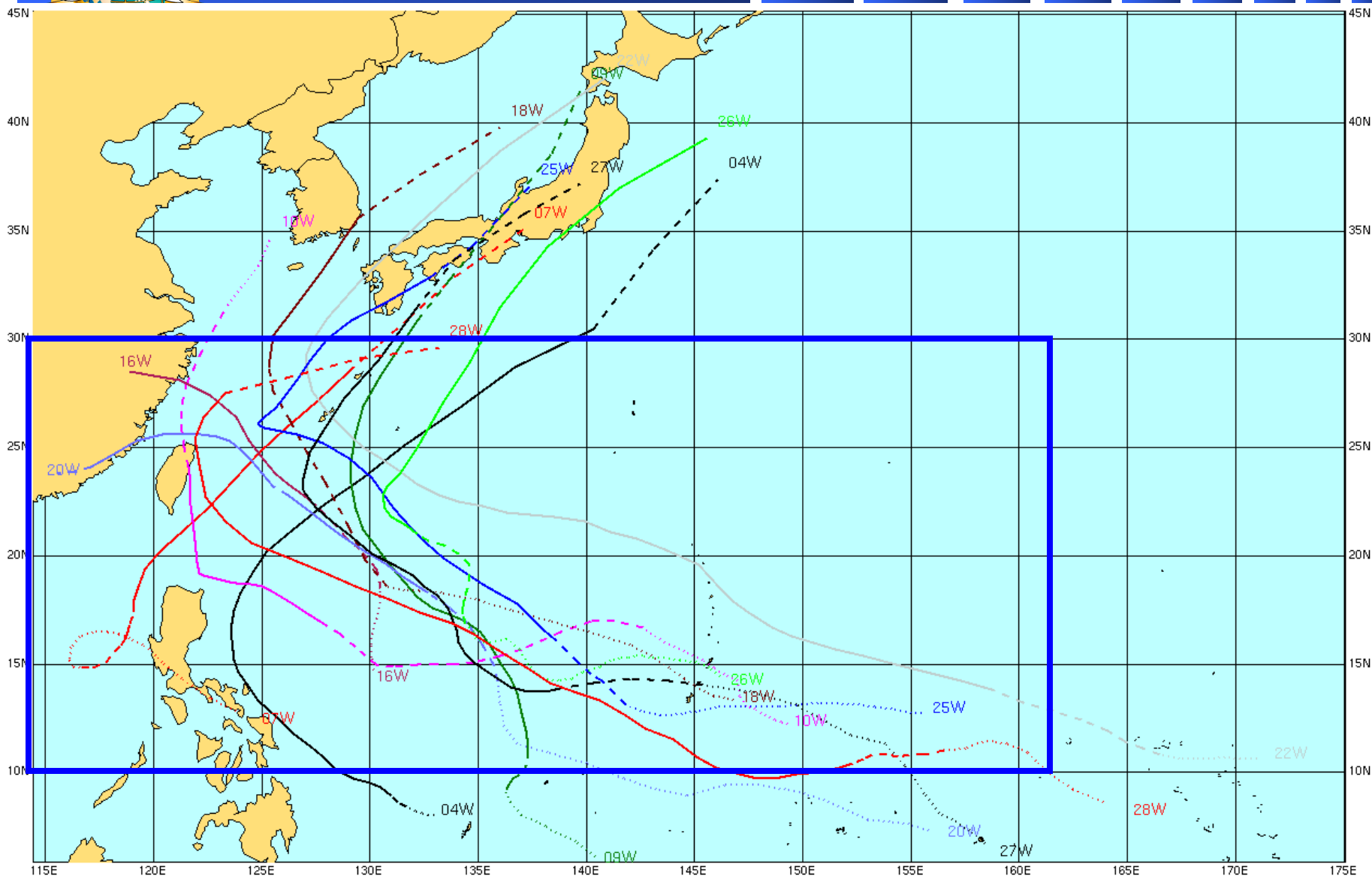
2004 Japan Storms



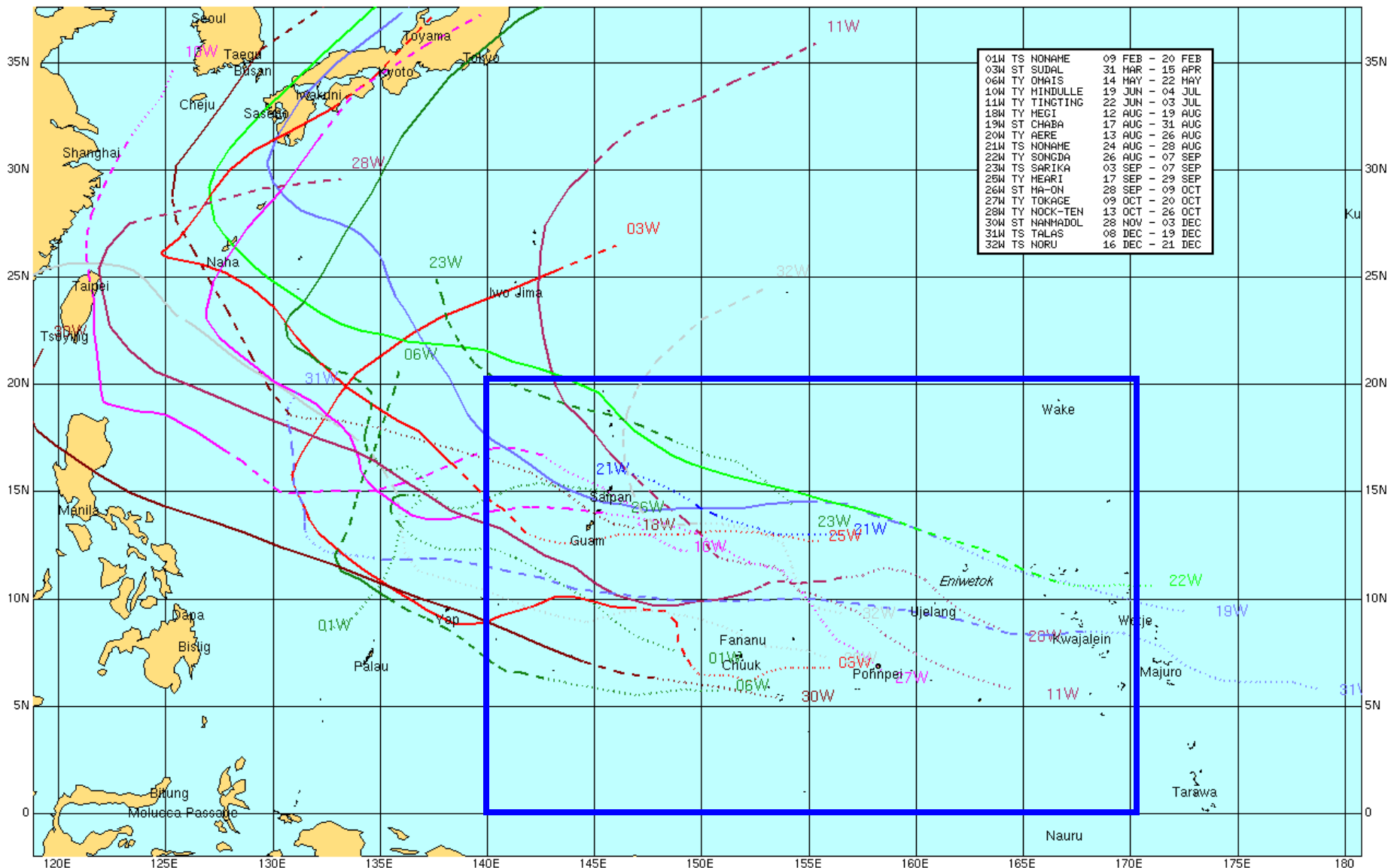
FIED



2004 Okinawa Storms

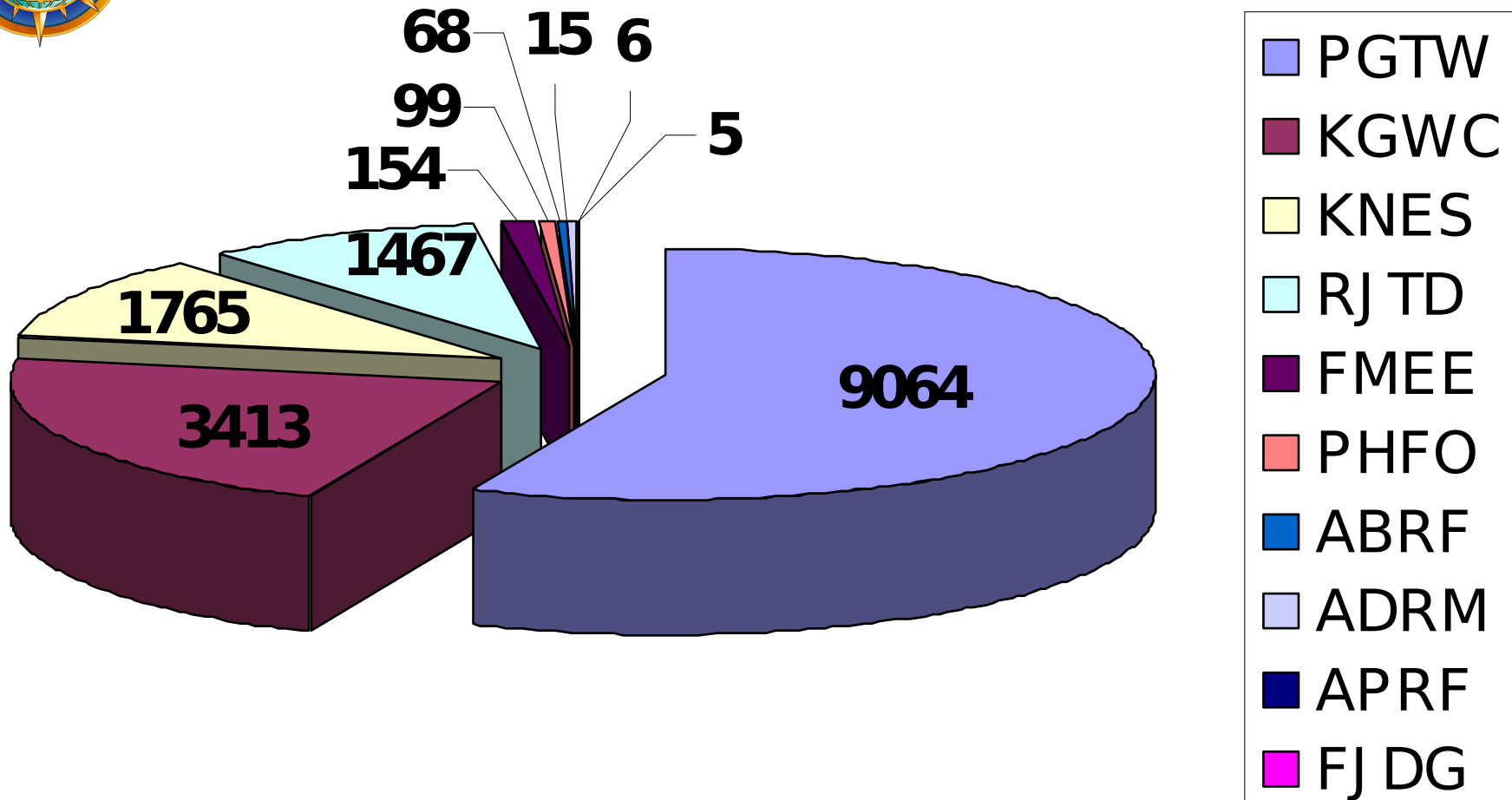


2004 Guam Storms



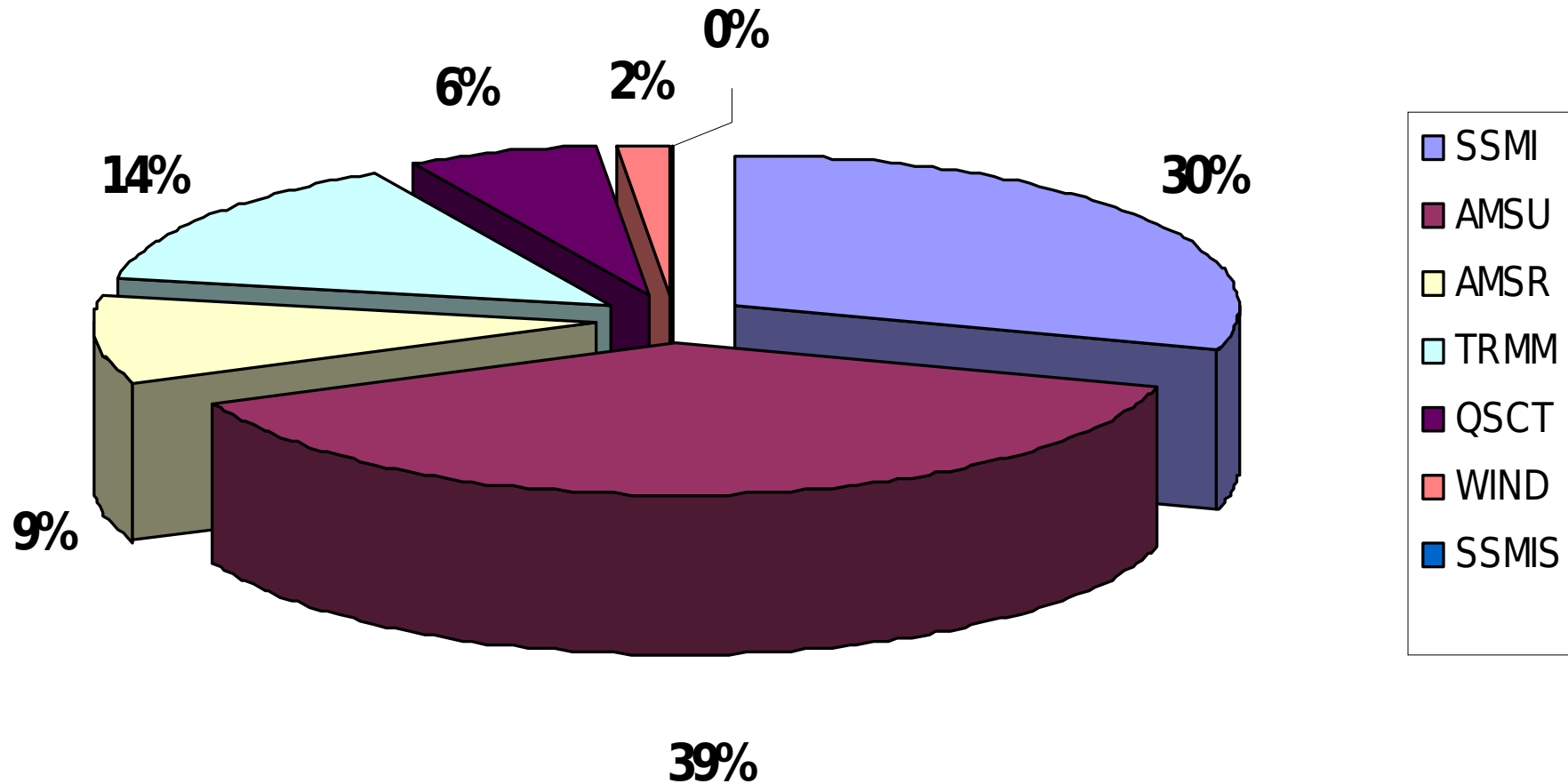
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2004 Satellite Fixes by Agency



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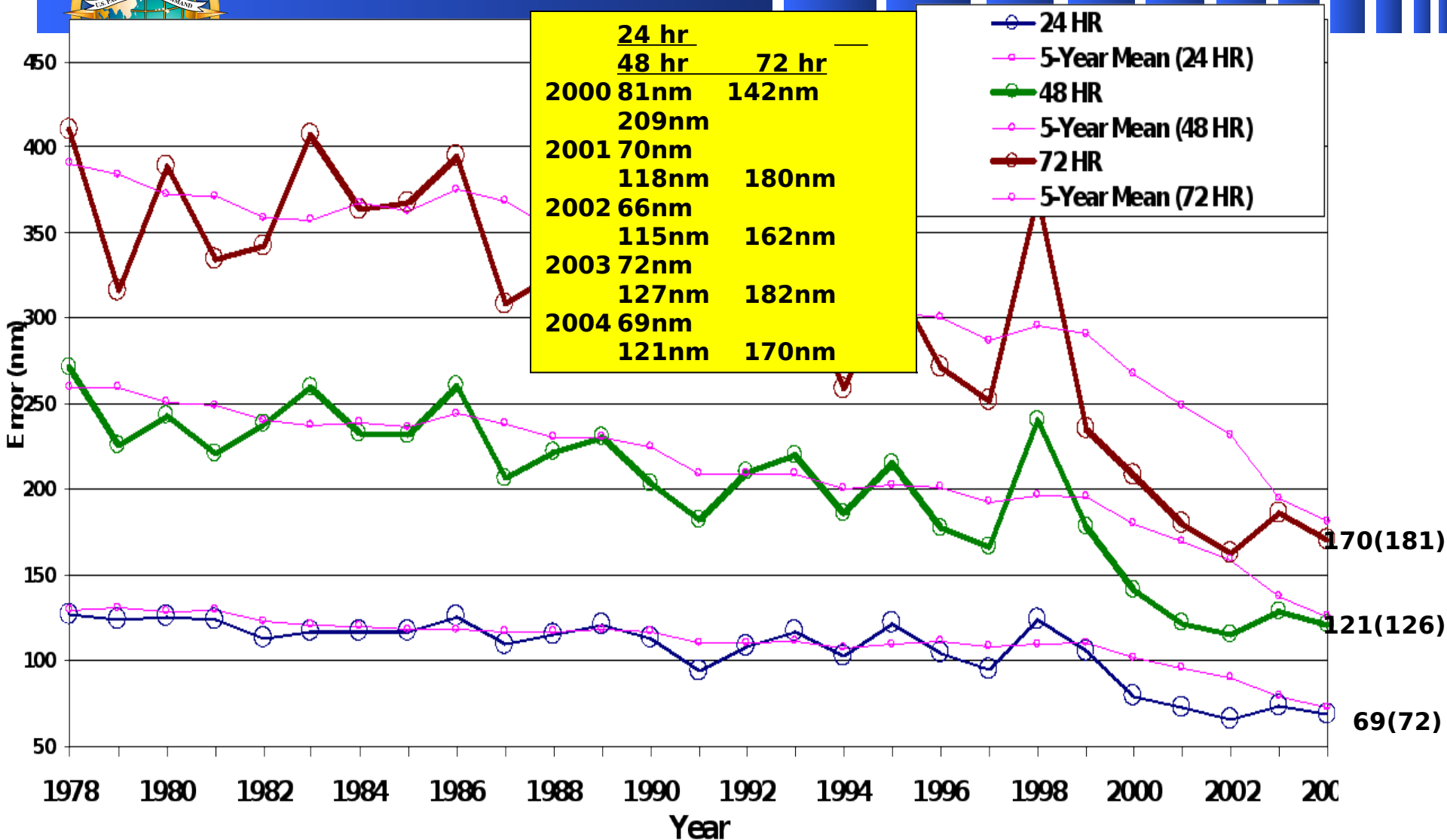
2004 Microwave Fixes by Platform



PGTW Only

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JTWC Position Error

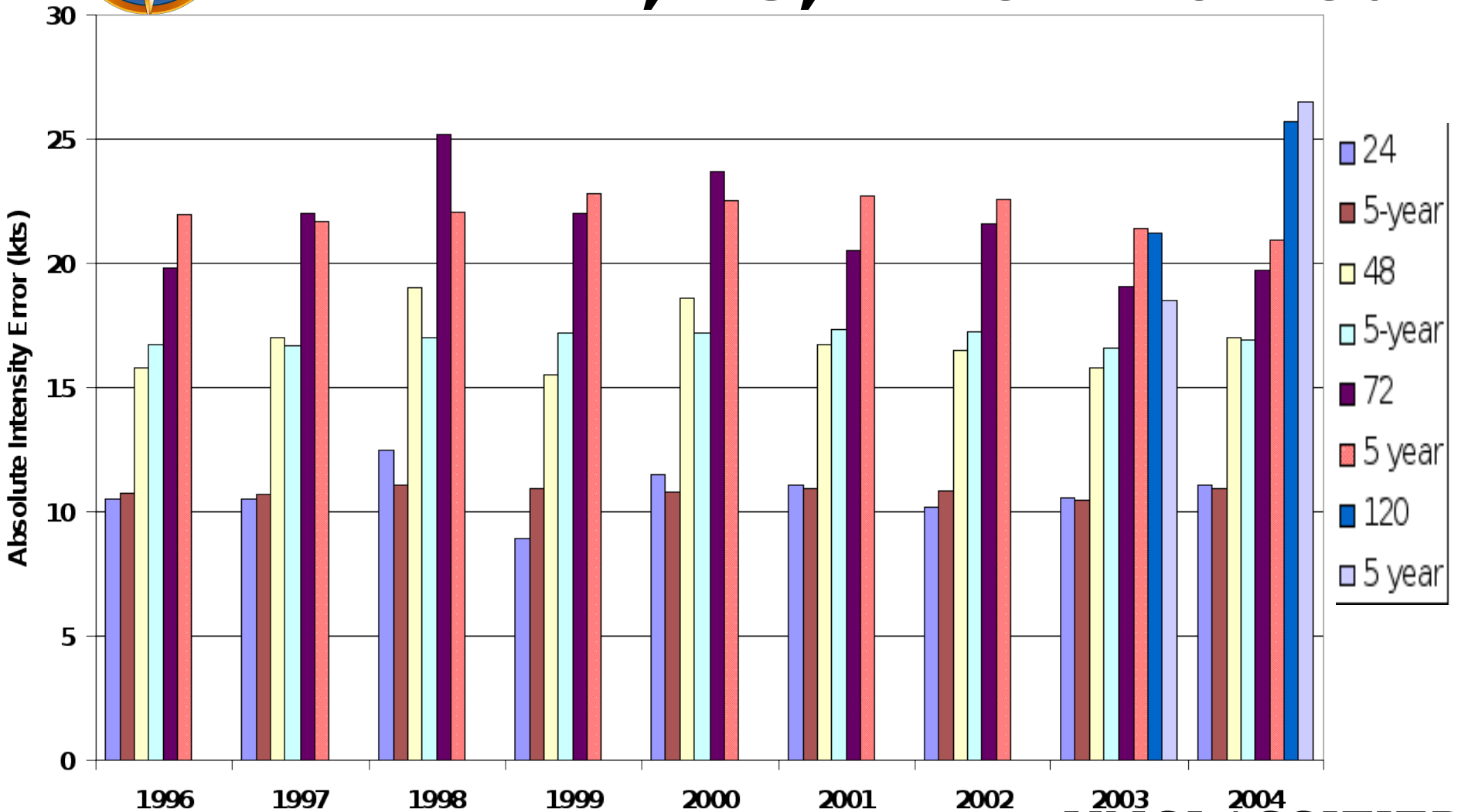


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JTWC Forecast Intensity

Error

24, 48, 72 & 120 hour



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On the Horizon for 2005



- **Improvements to Intensity Forecasts**
- **Development of better uncertainty products using JHT-funded Monte Carlo Wind Probability Study**
- **Participate in WSUAV study**
- **Evaluate new foreign met vortex trackers for use in consensus forecast**
- **Ops-eval of off-hour fixes**
- **Bring new satellite data on-line**
- **TRAINING**

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